

RIGID GATED PIPELINE

Design Survey

The following information, as needed for adequate planning and design, shall be obtained and recorded in the field notes:

- a. Critical elevations of area to be served.
- b. Pertinent water surface elevations.
- c. Topography at structure location(s), job approval class II to V¹
- d. Soil investigation (can be shown on soils map).

Design Data

The following information shall be recorded in the design notes, Gated Irrigation Pipe Design Worksheet, or on the construction drawings:

- a. Capacity requirement based on needs.
- b. Hydraulic design, including appurtenances.
- c. Structural design.
- d. Pipeline design (consideration of internal pressure).
- e. Quantity computations.

Drawings and Specifications

When the gated pipe is within job approval class I or II, the Gated Irrigation Pipeline Worksheet may be used as construction drawings. The construction drawings may include but not necessarily be limited to the following:

- a. Overall plan view of conveyance and area to be served.
- b. Location map. (May be combined with a.)
- c. Plan and profile showing design grade as required.
- d. Structural plans and section views as required.
- e. Location and size of appurtenances (may show on location map).
- f. Gated pipe diameter and class, code or rating.
- g. Details of installation requirements.
- h. Table of quantities.

Practice specifications along with applicable "Items of Work and Construction Details" shall be provided for each item or phase of construction, as needed to clarify the work.

¹ See Wyoming chart for engineering job approval authority in the National Engineering Manual (WY 501.04(a)(2)).

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Layout Survey Notes

No layout survey notes are required for the gated pipeline. The following information shall be recorded in the field notes or on the Gated Irrigation Pipeline Design Worksheet.

- a. Appurtenances locations.
- b. Structure layout, alignment and reference stakes.

Compliance Checks

The complexity of the conveyance and gated pipe irrigation system will dictate the need for compliance checks during construction. All compliance checks shall be recorded in the field notes or Gated Irrigation Pipeline Design Worksheet. Narratives of construction checks shall be recorded in the job diary, Gated Irrigation Pipeline Design Worksheet or on a sheet in the field notes. Compliance checks may include but will not be limited to the following:

- a. Profile at critical locations.
- b. Pipe diameters and class, code, or rating.
- c. Size and location of appurtenances.
- d. Dimension and elevation of structures.
- e. Statement of compliance.

As-Built Plans

Plans may not be required for non-complex gate pipe jobs. The design and layout may be accomplished at the same time. Information indicating conformance with the standard should be entered in the field notes or on the Gated Irrigation Pipeline Design Worksheet.

As-Built plans shall reflect all significant changes in linear measurements, quantities, alignment, pipe classification or design changes. If there were no changes, the original drawings shall be marked "As-Built".